

<b>BILL NO 1 - PRELIMINARY AND GENERAL</b>							
<b>SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION</b>							
<b>SILIN DINI, M ADUN</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Total Price</b>		
1,1	<b>Condition of Contract</b>						
1.1.1	Compliance with all the contractual requirements of the contract, including providing necessary insurances required to adequately to cover the works, outage management, weekly progress reporting, materials management, meetings and quality & environmental management.	Item	1	R	-	R	
1,2	<b>Site Store and Office</b>						
	Establish facilities on site. The Contractor shall provide fenced space with fence at least 1.8m high with a lockable gate for a temporary Site Office and Stores where all drawings and Specifications will be kept, as well as the provision of safe and Facilities for Contractor:						
	a) Offices & storage sheds	sum	1	R	-	R	
	b) Establishment of staff accommodation, office accommodation on site for site meetings and a Clerk of Works including office furniture and telephone / telefax as specified and facilities.	sum	1	R	-	R	
	c) Ablution & latrine facilities	sum	1	R	-	R	
	d) Tools & equipment	sum	1	R	-	R	
	e) Water supplies, electric power & communications	sum	1	R	-	R	
1.2.1	Other fixed charge obligations	sum	1	R	-	R	
1.2.2	Removal of all items indicated above upon completion of construction and making good and restoring of the Site to the satisfaction of the Consultant.	sum	1	R	-	R	
1.2.3	Provision of "As Built" drawings.	sum	1	R	-	R	
1.2.4	Construction Name Board - The Contractor shall place an order and collect from Eskom and maintain one project signboard bearing the name of the project, the name and logo of Eskom, and the Contractor.	sum	1	R	-	R	
1.2.5	Provision of samples of materials to be used (only materials supplied by contractor).	sum	1	R	-	R	
1.2.6	Provision for the compilation of the Construction Programme, to be done in MS Project and updated on a fortnight basis and Quality Assurance Programme for the works.	sum	1	R	-	R	
1,3	<b>Compliance with OHS Act &amp; Construction Regulation</b>						
1.3.1	Provision for Legal and Contractual Compliance.	sum	1	R	-	R	
1.3.2	Provision of personal protective equipment and clothing for all the contractor's staff, including sub-contractors.	sum	1	R	-	R	
1.3.3	Provision of safety measures, e.g.. Fall arrest systems, shoring for safety purposes etc.	sum	1	R	-	R	
1.3.4	Compliance with OH&S Act & Construction Regulations.	sum	1	R	-	R	
1.3.5	Orange PVC netting with supports to barricade all excavation, STOP-GO & danger signs, chevron markers, cones, etc	sum	1	R	-	R	
	Amount carried over to next page					R	

Item	Description	Unit	Qty	Rate	Total Price
	Amount brought forward from previous page				R -
1.4	<b>Compliance with the Requirements for the Expanded Public Works Programme (EPWP).</b>  Note: The reports are to be submitted with the contractors monthly invoice.				
1.4.1	Compliance with the Requirements for the Expanded Public Works Programme (incl. monthly reports).	Item	1	R -	R -
1.5	<b>Material Management</b>				
1.5.1	The Contractor shall make allowance to receive, transport to site off load and stack the free-issue materials supplied to the contract. The rate shall also include the implementation and maintenance Management System for the duration of the contract.	sum	1	R -	R -
1.5.2	On Completion of the project, all unused materials supplied free issue materials shall be reconciled and qualified. Once authorised by the Consultant/Project Co-ordinator, the unused materials shall be transported to Eskom New Germany stores using the correct	sum	1	R -	R -
1.6	<b>Time Related Items (To maintain site for the project)</b>				
1.6.1	Operate and Maintain Facilities on Site Facilities for Contractor:				
a)	Offices & storage sheds	months	6	R -	R -
b)	Ablution & latrine facilities	months	6	R -	R -
c)	Tools & equipment	months	6	R -	R -
d)	Water supplies, electric power & communications	months	6	R -	R -
e)	Health and Safety (Service provider directly accountable to client for Health and Safety Services)	months	6	R -	R -
1.6.2	Social Facilitation Fees ( Service provider directly accountable to client for ISD Services)	months	6	R -	R -
1.6.3	Contract management and full time supervision of the works.	months	6	R -	R -
1.6.4	Overhead costs	months	6	R -	R -
1.6.5	Provision for a trainee in electrical engineering - client to appoint student	months	6	R 5 000,00	R 30 000,00
1.6.6	Community Liaison Officer conversant in Zulu and local cultural norms.	months	6	R 5 000,00	R 30 000,00
1.6.7	Provisional Sum for project steering committee - seating allowance	months	6	R 1 500,00	R 9 000,00
1.7	<b>Security</b>				
1.7.1	Contractor shall provide security guard/s to ensure the substation site including offices, storage sheds and all Free issue material are protected from theft or any damage. The Contractor needs to ensure that the above mentioned is guarded 24hrs a day.	months	6	R 15 000,00	R 90 000,00
1.8	<b>Special Engineering Services</b>				
1.8.1	Provisional sum for additional Engineering Services Inclusive of Environmental Assessment & Wayleaves and AMAFA documentation.	Prov Sum	1	R 55 000,00	R 55 000,00
1.8.2	Allowance for handling and profit in respect of item 1.8.1	10%	1	R 5 500,00	R 5 500,00
1.8.3	Provisional sum for providing Technical Support on site to the contractor (Clerk of Works) and Quality Assurance	Prov Sum	1	R 35 000,00	R 35 000,00
1.8.4	Allowance for handling and profit in respect of item 1.8.3	10%	1	R 3 500,00	R 3 500,00
	<b>TOTAL:</b> Carried forward to summary				R -

BILL NO 2 - MEDIUM VOLTAGE SWITCHGEAR, SECTIONALISERS, TRANSFORMERS, ETC SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION							
SILIN DINI,	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	<b>Transformers (Coastal Spec) - Pole Mounted</b>						
	Installation of existing or new transformers on an appropriate structure and secure as required including the termination of cables and conductors, the provision of suitable lugs for 35, 50 or 70mm conductor as required and all accessories. Excluding cable conductors, and the transformer structure. Include transport, offloading / loading, safe storage from appropriate Eskom store.						
2,1	New Transformer 16kVA, 22kV/+240V	3021	No	3	R	-	R
2,2	New Transformer 32kVA, 22kV/+240V/-240V	3021	No	1	R	-	R
2,3	New Transformer 64kVA, 22kV/415V	3021	No	1			R
2,4	New Transformer 50kVA, 11kV/415V	3021	No	0	R	-	R
2,5	New Transformer 100kVA, 11kV/415V	3021	No	0	R	-	R
2,6	New Transformer 200kVA, 11kV/415V	3021	No	0	R	-	R
2,7	Existing transformers to be moved out of line as well as upgrading to present standard	3021	No	0			R
2,8	DATA CONCENTRATOR UNIT, INTERFACE DC450 MODEM G3 PLC DC 230 V (INTERNAL MODEM)	621052	No	5	R	-	R
	<b>Medium Voltage Surge Arrestors</b>						
	Supply, deliver, off load on site and safely store on site the following surge arrestors, complete with galvanised steel mounting brackets for securing the surge arrestor, nuts, bolts, washers and lock washers as specified. Secure the surge arrestor and brackets to the transformer as specified including the termination of conductors the termination of conductors. Excluding the conductors and transformer. Discharge current 10kA.						
2,9	22kV, MCOV 19.2kV Surge arrestor, 31mm/kV, coastal. <b>NB:</b> Double Surge Arrestors	3100	No	20	R	-	R
	<b>Medium Voltage Sectionalisers and Links</b>						
	Supply and install link isolators as detailed including the installation of crossarm brackets and the termination of conductors and including the drilling of holes in wooden poles as required 15k fused links.						
2,10	22kV, Solid links, Single Pole (2.5 X-am) (dual phase).	1848/1849	Set	0	R	-	R
2,11	22kV, Solid links, Single Pole Mount (dual phase).	3086	Set	0	R	-	R
2,12	22kV, Solid links, Single Pole (2.5 X-am) (three phase).	1848/1849	Set	4	R	-	R
2,13	22kV, Solid links, Single Pole Mount (three phase).	3086	Set	0			R
2,14	22kV, Fuse links, Single Pole (2.5m X-am) (dual phase).	1848/1849	Set	1	R	-	R
2,15	22kV, Fuse links, Single Pole Mount (dual phase).	3086	Set	1	R	-	R
2,16	22kV, Fuse links, Single Pole (2.5m X-am) (three phase).	1848/1849	Set	2	R	-	R
2,17	22kV, Fuse links, Single Pole Mount (three phase).	3086	Set	2	R	-	R
2,18	22kV, Solid links, Single Pole (3.5m / 4.5m X-arm) / H- Pole (three phase).	1847	Set	0			R
	Amount carried over to next page						R

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
2,19	11kV, Fuse links, Single Pole / H- Pole Mount (three phase).	1850	Set	0			R -
2,20	11kV, Fuse links, H- Pole Mount / (2.5m X-arm) (three phase).	1851	Set	0			R -
2,21	11kV, Solid links, H- Pole Mount / (3.5m / 4.5m X-arm) (three phase).	1852	Set	0			R -
2,22	11kV, Fuse links, H- Pole Mount / (2x2.5m X-arm) (three phase).	1853	Set	0			R -
	<b>Neutral Surge Arrestor</b>						
	Supply and install a LV surge arrestor including lugs and galvanised bolts.						
2,23	6kV, 10kA Surge Arrestor	3088	No	5	R -	R -	R -
	<b>MV Section Breaker/Voltage Regulator</b>						
2,24	New Section Breaker 11+22kV, 400A, 8kA with IRTU/Modem. (includes the cabling and control box). Allow for transport from the supplier, loading/offloading, safe storage.	DDT-3017	Unit	0	R -	R -	R -
2,25	New Voltage Regulator, 11 + 22kV 100A/200A 8kA with IRTU (includes the cabling and control box). Allow for transport from the supplier, loading/offloading, safe storage.	DDT-3119	Unit	0	R -	R -	R -
	<b>Transformer &amp; Equipment Earthing</b>						
	Supply and install all materials for the complete earthing of transformer structures for ABC networks as specified. Included in the rate shall be all required spikes, insulated copper conductor, excavations, backfilling, etc. The rate shall allow for all required MV earth electrodes, consisting of four earth spikes in accordance with the Distribution specification, Part 2. Additional earth spikes / conductor shall be measured elsewhere if required.						
2,26	MV Earth (per transformer)	1860/1	No	5	R -	R -	R -
2,27	MV Earth Section Breaker Earthing	1829B	No	0	R -	R -	R -
2,28	MV M/SUB EARTHING w/o continuous earth cond to source sub (per voltage regulator)	DDT-0855	No	0	R -	R -	R -
	<b>TOTAL: Carried forward to summary</b>						R -

BILL NO 3 - MEDIUM VOLTAGE OVERHEAD DISTRIBUTION SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION								
SILIN DINI,	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price	
<b>CONDUCTOR</b>								
Supply, safely store on sealed drums with ends adequately secured and transport to site conductor as specified. String conductor as specified including splices, jumper conductor ties, strain clamps, suspension clamps, tensioning, sagging, etc.								
The following dimensions will all be Conductor Length with 10% is allowed for slack & wastage. Additional wastage/slack Additional wastage/slack is for Contractor's account.								
3.1	COND,ACSR FOX 8.37D UNGRS	3136	m	35000	R -	R -	R -	
3.2	COND, ACSR HARE	3136	m	2000	R -	R -	R -	
<b>MV STRUCTURES</b>								
Allow for the following structures and insulator assemblies in accordance with the specifications as shown in the drawings.								
Include the specified crossarms, drilling of holes and treating of such holes, the provision of the U-nails and earthwire in accordance with Eskom specifications. All jumpers to links and transformers to be installed with PVC black pipe. Supply and installation of 15m of 3/3.35x1100MPa steel wire for a BIL for each pole structure as per Eskom specification. Exclude the supply and planting of poles, stays and struts which are measured elsewhere. Insulators as per EI090SS. Include BIL insulation co-ordination for shared MV & LV structures as per 03TB-34 or later approved Eskom standard.								
Note	Supply and install all material as specified for the construction of the following MV structures. Including bonding of hardware and earthing. All excavations, poles, crossarms and stay are measured elsewhere.							
Note: RX refers to statutory road crossings with the relevant DDT0257-10kN-31mm/kV post insulator, full wrap tie (suspension structures) or DDT0251 - 40KN-31mm/kV longrod with pistolgrips (strain structures).								
3.3	Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation	1340B	No	2	R -	R -	R -	
3.4	Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation (RX).	1340B-RX	No	1	R -	R -	R -	
3.5	Delta / 2,5m Wood X-arm - Strain - 0° Deviation	1343	No	4	R -	R -	R -	
3.6	Delta / 2,5m Wood X-arm - Strain - 0° Deviation (RX).	1343-RX	No	1	R -	R -	R -	
3.7	Delta / 2,5m Wood X-arm - Strain - Medium (1°- 60°) Deviation.	1344	No	2	R -	R -	R -	
3.8	Delta / 2,5m Wood X-arm - Strain - Medium (1°- 60°) Deviation (RX).	1344-RX	No	0	R -	R -	R -	
	Amount carried over to next page							

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
3,9	Delta / 2,5m Wood X-arm - Strain - Terminal	1346	No	1	R -	R -	R -
3,10	Delta / 2,5m Wood X-arm - Strain - Terminal(RX)	1346-RX	No	1	R -	R -	R -
3,11	Delta - H-Pole / 4,5m Wood X-arm - Intermediate 0° Deviation	1370	No				
3,12	Delta - H-Pole / 4,5m Wood X-arm - Intermediate 0° Deviation (RX).	1370-RX	No				
3,13	Delta - H-Pole / 4,5m Wood X-arm - Intermediate 1°- 10° Deviation	1371	No				
3,14	Delta - H-Pole / 4,5m Wood X-arm - Intermediate 1°- 10° Deviation	1371-RX	No				
3,15	Delta - H-Pole / 4,5m Wood X-arm - Strain 0° Deviation	1373	No				
3,16	Delta - H-Pole / 4,5m Wood X-arm - Strain 0° Deviation (RX).	1373-RX	No				
3,17	Delta - H-Pole / 4,5m Wood X-arm - Strain - Medium (1°-60°) Deviation.	1374	No				
3,18	Delta - H-Pole / 4,5m Wood X-arm - Strain - Medium (1°-60°) Deviation (RX).	1374-RX	No				
3,19	Delta - H-Pole / 4,5m Wood X-arm - Strain - Terminal	1376	No				
3,20	Delta - H-Pole / 4,5m Wood X-arm - Strain - Terminal (RX)	1376-RX	No				
<b>3 PHASE STRUCTURES GENERAL ARRANGEMENT</b>							
3,21	Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation	1740B	No	50	R -	R -	R -
3,22	Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation (RX).	1740B-RX	No	10	R -	R -	R -
3,23	Delta / 2,5m Wood X-arm - Strain - 0° Deviation	1743	No	15	R -	R -	R -
3,24	Delta / 2,5m Wood X-arm - Strain - 0° Deviation (RX).	1743-RX	No	8	R -	R -	R -
3,25	Delta / 2,5m Wood X-arm - Strain - Medium (1°-60°) Deviation	1744	No	40	R -	R -	R -
3,26	Delta / 2,5m Wood X-arm - Strain - Medium (1°-60°) Deviation (RX).	1744-RX	No	4	R -	R -	R -
3,27	Delta / 2,5m Wood X-arm - Strain - Terminal	1746	No	15	R -	R -	R -
3,28	Delta / 2,5m Wood X-arm - Strain - Terminal (RX).	1746-RX	No	5	R -	R -	R -
3,29	3 Phase - Delta / 2x2,5m Wood X-arm – Strain Intermediate - 0° Deviation	1747	No	2	R -	R -	R -
3,30	3 Phase - Delta / 2x2,5m Wood X-arm – Strain Medium(1°-60°) Deviation	1748	No	1	R -	R -	R -
3,31	3 Phase - Delta / 2x2,5m Wood X-arm – Strain Medium(60°-90°) Deviation	1745	No				
3,32	3 Phase - Delta / 2x2,5m Wood X-arm – Strain Terminal	1749	No				
3,33	3 Phase - Delta / 4,5m Wood X-arm - Intermediate – 0° Deviation	1750	No	2	R -	R -	R -
	Amount carried over to next page						R -

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
Amount brought forward from previous page							R -
3,34	3 Phase - Delta / 3,5m Wood X-arm - Intermediate – 0° Deviation	1760	No				
3,35	3 Phase - Delta / 4,5m Wood X-arm - Strain – 0° Deviation	1753	No	2	R -	R -	R -
3,36	3 Phase - Delta / 4,5m Wood X-arm - Strain - Medium (1°-60°) Deviation	1754	No	1	R -	R -	R -
3,37	3 Phase - Delta / 4,5m Wood X-arm - Strain Terminal	1756	No				
3,38	3 Phase - H-Pole / 3,5m Wood X-arm - Strain – 0° Deviation	1763	No				
3,39	3 Phase - H-Pole / 3,5m Wood X-arm - Strain – Medium (1°-60°) Deviation	1764	No				
3,40	3 Phase - H-Pole / 3,5m Wood X-arm - Strain – Terminal	1766	No	2	R -	R -	R -
3,41	3 Phase - H-Pole / 2x3,5m Wood X-arm - Strain – 0° Deviation	1767	No				
3,42	3 Phase - H-Pole / 2x3,5m Wood X-arm - Strain - Medium(1°-60°) Deviation	1768	No				
3,43	3 Phase - H-Pole / 2x3,5m Wood X-arm - Strain-Terminal	1769	No				
3,44	3 Phase - H-Pole / 4,5m Wood X-arm - Intermediate – 0° Deviation	1770	No				
3,45	3 Phase - H-Pole / 4,5m Wood X-arm - Intermediate Small (1°-10°) Deviation	1771	No				
3,46	3 Phase - H-Pole / 4,5m Wood X-arm - Strain – 0° Deviation	1773	No	1	R -	R -	R -
3,47	3 Phase - H-Pole / 4,5m Wood X-arm - Strain - Medium (1°-60°) Deviation	1774	No				
3,48	3 Phase - H-Pole / 4,5m Wood X-arm - Strain - Terminal	1776	No				
3,49	3 Phase - H-Pole / 2x4,5m Wood X-arm - Strain – 0° Deviation	1777	No				
3,50	3 Phase - H-Pole / 2x4,5m Wood X-arm - Strain - Medium (1°-60°) Deviation	1778	No				
3,51	3 Phase - H-Pole / 2x4,5m Wood X-arm - Strain - Large (61°-90°) Deviation	1873	No				
3,52	3 Phase - H-Pole / 2x4,5m Wood X-arm - Strain - Terminal	1779	No				
3,53	3 Phase - Trips - Strain - 0° Deviation	1783	No				
3,54	3 Phase - Trips - Strain - Large (01°-90°) Deviation	1784	No				
	Amount carried over to next page						R -

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
Note	<p><b>MV STRUCTURES</b></p> <p>Allow for the following structures and insulator assemblies in accordance with the specifications as shown in the drawings.</p> <p><b>Include</b> the specified crossarms, drilling of holes and treating of such holes, the provision of the U-nails and earthwire in accordance with Eskom specifications. All jumpers to links and transformers to be installed with PVC black pipe. <b>Supply and installation</b> of 15m of 3/3.35x1100MPa steel wire for a BIL for each pole structure as per Eskom specification. <b>Exclude</b> the supply and planting of poles, stays and struts which are measured elsewhere. Insulators as per EI090SS. Include BIL insulation co-ordination for shared MV &amp; LV structures as per 03TB-34 or later approved Eskom standard.</p> <p><b>Supply and install</b> all material as specified for the construction of the following MV structures. Including bonding of hardware and earthing. All excavations, poles, crossarms and stays are measured elsewhere.</p> <p>Note: RX refers to statutory road crossings with the relevant DDT0257-10kN-31mm/kV post insulator, full wrap tie (suspension structures) or DDT0251-40kN-31mm/kV longrod with pistolgrips (strain structures).</p>						
3,55	3-Phase, Take off (2.5m X-arm)	1804	No	4	R -	R -	R -
3,56	3-Phase, Take off (2.5m X-arm) (RX)	1804-RX	No	2	R -	R -	R -
3,57	3-Phase, Take off (2x2.5m X-arm)	1805	No	5	R -	R -	R -
3,58	3-Phase, Take off - H-Pole (3.5m X-arm)	1806	No				
3,59	3-Phase, Take off - H-Pole (2x3.5m X-arm)	1807	No				
3,60	2-Phase, Take off (2.5m X-arm)	1814	No	2	R -	R -	R -
3,61	2-Phase, Take off (2.5m X-arm) (RX)	1814-RX	No				
3,62	2-Phase, Take off - 2x2.5m X-arm	1815	No				
3,63	2-Phase, Take off - H-Pole (3.5m X-arm)	1816	No				
3,64	2-Phase, Take off - H-Pole (2x3.5m X-arm)	1817	No				
3,65	Transformer - Single Pole mount (16 -100kVA).	1860	No				
3,66	Transformer - 2 Pole platform mount(H-Pole) - 100 -200kV	1861	No				
3,67	Transformer - Pole mounting out-of-line (16-100kVA) includes 1860 module, etc... as per EI067-MVL and excludes transformer.	1866B	No	5	R -	R -	R -
3,68	Transformer - Pole mounting out-of-line (100-200kVA) includes 1860 module, etc... as per EI067-MVL and excludes transformer.	1865B	No				
3,69	NEW Recloser Structure, (exclusive of poles, stays, crossarms, links, excavations, approved anticaliming device, etc... as per EI070-MVL.)	1829B	No				
3,70	NEW Voltage Regulator Structure, (exclusive of poles, stays, crossarms, links, excavations, approved anticaliming device, etc... as per EI-124-MVL. Recloser supplied by Eskom) Allow for transport, loading/offloading, safe storage from Eskom stores to site.	1833B	No				R -
	Amount carried over to next page						R -

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page					R	-
	<b>Testing</b>  Allowance shall be made for the complete testing and commissioning of the Medium Voltage overhead distribution system.						
3,71	MV Test (per transformer installation)		No	5		R	-
7,72	MV Test (per Auto-recloser installation)		No				
3,73	MV Test (Voltage Regulator installation)		No				
<b>TOTAL: Carried forward to summary</b>							R -

<b>BILL NO 4 - SUPPORT FOR OVERHEAD RETICULATION</b> <b>SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION</b>							
<b>SILIN DINI,</b>	<b>Description</b>	<b>DDT Ref</b>	<b>Unit</b>	<b>Qty</b>	<b>Supply Rate</b>	<b>Install Rate</b>	<b>Total Price</b>
	<b>POLES AND CROSSARMS</b>						
	Supply and safely store the following poles. Transport to site of works and install pole in excavated hole, including cutting and scafing, kicking blocks, bonding, treating, etc. Excavations and compaction are measured elsewhere.						
4,1	7m Pole, 120-139mm top diameter	0050	No	2	R	-	R
4,2	9m Pole, 140-159mm top diameter	0055	No	2	R	-	R
4,3	9m Pole, 160-179mm top diameter	0055	No	82	R	-	R
4,4	10m Pole, 200-219mm top diameter	0052	No	5	R	-	R
4,5	11m Pole, 160-179mm top diameter	0051	No	46	R	-	R
4,6	11m Pole, 180-199mm top diameter	0051	No	86	R	-	R
4,7	11m Pole, 200-219mm top diameter	0051	No	4	R	-	R
4,8	12m Pole, 160-180mm top diameter	0053	No	0			R
4,9	12m Pole, 180-199mm top diameter	0053	No	0	R	-	R
4,10	12m Pole, 200-219mm top diameter	0053	No	4			R
4,11	13m Pole, 160-180mm top diameter	0056	No	0			R
4,12	13m Pole, 180-200mm top diameter	0056	No	0			R
	Supply, off load and install the following wooden cross arms.						
4,13	2.5m, 140 -159mm Diameter	0061	No	140	R	-	R
4,14	3.5m, 140 -159mm Diameter	0063	No	6	R	-	R
4,15	4.5m, 160 -179mm Diameter	0064	No	4	R	-	R
4,16	6m, 160 -179mm Diameter	0064	No	5	R	-	R
	<b>Stays, Flying Stays and Anti-Climbing Devices</b> The unit price for a standard stay and an aerial stay shall exclude the wooden poles, but include the stay wire, stay rods, insulators, stay plate, stay guards, bitumastic paint, guy grip dead end, earthing of stay, line splice, precast concrete slabs, pole clamp, nuts bolts and washers etc.						
	<b>The following stays shall be in accordance with the specifications and shall include stay plate.</b>						
4,17	MV Stay (DDT0341 rev 9, BIL 40kV & 150kV)	0341	No	158	R	-	R
4,18	LV Stay	0341	No	48	R	-	R
	<b>The following flying stays shall be in accordance with the specifications and shall include poles &amp; excavation.</b>						
4,19	MV Flying Stay	0343	No	6	R	-	R
4,20	LV Flying Stay	0343	No	4	R	-	R
	<b>The following struts shall be in accordance with the specifications and shall include poles &amp; excavation.</b>						
4,21	MV Strut	0342	No	6	R	-	R
4,22	LV Strut	1167	No	8	R	-	R
	Amount carried over to next page						R

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page					R	-
	<b>EXCAVATIONS AND COMPACTION</b>  The excavations for service connections are measured elsewhere.  <b>Determination of pole positions, excavate, and supply a mechanical boring device if required.</b> The rate shall include backfilling, compaction to 93% MOD AASHTO density, and where necessary the supply and transportation of suitable ground as may be required to receive the desired compaction, except where cement is specified. Any damage to existing services shall be made good by the Contractor at his own expense and to the approval or the PM(C).  Before excavation work begins the Contractor shall evaluate the stability of the ground before excavation begins. Contractor shall use warning signs, positioned next to an excavation within which persons are working or carrying out inspections. Ref CR (11).						
4,23	Hole for 7m pole - 1.3m deep	0332	No	2	R	-	R
4,24	Hole for 9m pole - 1.5m deep	0332	No	84	R	-	R
4,25	Hole for 10m pole - 1.6m deep	0332	No	5	R	-	R
4,26	Hole for 11m pole - 1.8m deep	0332	No	136	R	-	R
4,27	Hole for 12m pole - 2.0m deep	0332	No	4	R	-	R
4,28	Hole for 13m pole - 2.2m deep	0332	No	0	R	-	R
4,29	Hole for MV stay - 1.5m deep	0350	No	164	R	-	R
4,30	Hole for LV stay - 1.4m deep	0350	No	52	R	-	R
4,31	Hole for MV strut - 1.8m deep	0342	No	6	R	-	R
4,32	Hole for LV strut - 1.3m deep	0342	No	8	R	-	R
4,33	Provisional blasting - Up to 2,2m deep. Each hole to be verified by Clerk of Works. Develop a method statement in accordance with explosives legislation, by an appointed person who is competent in the use of explosives for excavation work and that the procedures therein are followed. Ref CR (11)		No	50	R	-	R
4,34	Rock excavation (the contractor is to provide adequate measures to ensure a rock hole be excavated to the correct depth to facilitate the correct infrastructure, this may include the excavation per rock hole by mechanical means viz. Compressors dependent on diesel fuel to accommodate Jackhammer drilling). These Rock Holes to be verified by the relevant Clerk of Works. Ref CR (11)		No	100	R	-	R
	Amount carried over to next page					R	-

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
	<b>POLE LABES</b>  Supply and install labels on all poles in accordance with the specifications including the provision of all fixing materials. Allow for pick-up, loading/offloading, transport from appropriate Eskom store. Labels to the Eskom Standard SCSSCAAP5, TQGHSP05 and TQCSS005. Dynatape, masking tape or Hand written with permanent marker type labels are not to be considered for operational labelling under any circumstances.						
4,35	Equipment labels		No	15			R -
4,36	Mosdorfer fuse rating labels (transformers)		No	16			R -
4,37	Fuse - "Warning. Open all fuses before working on line"		No	16			R -
4,38	Transformer Max fuse notification label		No	16			R -
4,39	Feeder Max Fuse notification label		No	16			R -
4,40	Danger Labels (transformers, links, anti-climberings)	3202	No	15	R -	R -	R -
4,41	LV Feeder Labels		No	16			R -
4,42	House Connections Labels		No	93			R -
4,43	Pole Top Box Phase Labels		No	49			R -
	<b>GENERAL ITEMS</b>  Supply and install labels Spiral Vibration Dampers as per the DT Standards						
4,44	Spiral Vibration Dampers (Fox)	3175	ea	40	R -	R -	R -
4,45	Bird Flappers	3175	ea	50	R -	R -	R -
	Supply and Install Anti-Climbing Devices as per the latest DDT Standards.						
4,46	Anti-Climbing Device as per 05T109. Including the removal of existing spikes. Galvanised wire per DDT3170. Galvanised staples per DDT3129. Install on tfr str, struts, parallel MV stay wires, recloser str, OOL tfr str, etc, structures where meter boxes or equipment is installed <2m above ground, any str having cable secured by means of strapping <0.5m apart, any climbable pole str, apparatus etc as per DDT standard.	0399	per str	15	R -	R -	R -
4,47	Supply and Install, where MV & LV Earths are on the same structure, UV protected black PVC pipe of length 1.2m on each earth downwire, cutting the top and bottom of the pipe at 45deg, split the pipe so as to insert the MV/LV earth and installing clout nails at the bottom and top.		per str	5	R -	R -	R -
	<b>TOTAL: Carried forward to summary</b>						R -

BILL NO 5 - OVERHEAD DISTRIBUTION LINES SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION							
SILIN DINI, MAD	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	<b>LV ABC (insulated neutral)</b>						
Note	The LV insulated aerial bundle conductor system shall be in accordance with SABS 1418 and insulated in accordance with SABS 0198 and the Distribution Standard Part 3. Ref. EI-092-LVL						
Note	The unit rate per meter shall include the tensioning and stringing of the bundle in accordance with the sag and stress tables provided by the manufacturer with all plant, equipment and accessories required to erect an LV overhead bundled distribution line i.e. Drum trailer, winch, wind-off pulleys, pulling rope/cable with connection, dynamometer, slide-lock, sheathed synthetic-fibre belt, woven snatch belt, snatch block, tackle, shackle, etc.						
Note	Measured lengths for stringing shall be net line route lengths and unit rates shall include for sag, off-cuts, etc.						
	Supply, safely store and transport to site and string. The conductor will be delivered on sealed drums and adequate allowance shall be made for the correct handling thereof.						
	Ensure correct tooling - D 51 Hydraulic Crimping Tool and dies, a 13mm tube spanner with T – bar, Phase separators, Slings, Wide Grooved Pulleys, Steel Pulling Socks, Pulling Swivels, Rickie, Come-along and Dynamometers.						
5,1	Single phase ABC (35mm <sup>2</sup> , 2 core) - insulated neutral.	3141	m	3500	R	-	R
5,2	Dual phase ABC (35mm <sup>2</sup> , 3 core) - insulated neutral.	3141	m	3000	R	-	R
5,3	Three phase ABC (35mm <sup>2</sup> , 4 core) - insulated neutral.	3141	m				
5,4	Dual phase ABC (70mm <sup>2</sup> , 4 core) - insulated neutral.	3141	m	1000	R	-	R
	<b>LV STRUCTURES</b>						
	Allow for the assembly of the following LV strain and suspension assemblies in accordance with the specifications shown in the drawings. Including all earthing, drilling of holes and treating of drilled holes. All LV ABC hardware, line connectors, PVC cable ties, nuts, bolts, washers, lock washers shall be allowed for in the appropriate item below. Excluding the supply and planting of poles, stays and struts, which are measured elsewhere. Use strain assembly when crossing roads.						
	Supply and install all the materials as specified for following:						
5,5	Single Phase ABC Intermediate Assembly	1153	No	28	R	-	R
5,6	Single Phase ABC Terminal Assembly	1154	No	24	R	-	R
5,7	Single Phase ABC Strain Assembly (0-60 deg)	1155	No	6	R	-	R
5,8	Single Phase ABC Strain Assembly (60-90 deg)	1156	No	2	R	-	R
	Amount carried over to next page						R

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
5,9	Single Phase ABC Tee from Intermediate	1157	No	5	R -	R -	R -
5,10	Single Phase ABC X Suspensionn Assembly	1158	No				
5,11	Single Phase ABC Tee from Strain	1159	No	2	R -	R -	R -
5,12	Single Phase ABC X Intermediate Strain Assembly.	1160	No	2	R -	R -	R -
5,13	Dual Phase ABC Intermediate Assembly	1145	No	36	R -	R -	R -
5,14	Dual Phase ABC Terminal Assembly	1146	No	17	R -	R -	R -
5,15	Dual Phase ABC Strain Assembly (0-60 deg)	1147	No	9	R -	R -	R -
5,16	Dual Phase ABC Strain Assembly (60-90 deg)	1148	No				
5,17	Dual Phase ABC Tee from Intermediate	1149	No	2	R -	R -	R -
5,18	Dual Phase ABC X Suspensionn Assembly	1150	No	0			R -
5,19	Dual Phase ABC Tee from Strain	1151	No	0			R -
5,20	Single Phase ABC X Intermediate Strain Assembly	1152	No	1	R -	R -	R -
5,21	Thee Phase ABC Suspension Assembly 0-30	1100	No				
5,22	Thee Phase ABC Terminal Assembly	1120	No				
5,23	Thee Phase ABC Strain Assembly (0-60 deg)	1121	No				
5,24	Three Phase ABC Strain Assembly (60-90 deg)	1122	No				
5,25	Three Phase ABC Tee from Intermediate Assembly	1140	No				
5,26	Three Phase Intermediate Suspension Assembly	1141	No				
5,27	Three Phase ABC Tee from Strain	1142	No				
5,28	Three Phase ABC X Intermediate Strain Assembly.	1143	No				
	Amount carried over to next page						R -

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
	<b>LV FUSE SWITCHES UNITS</b>  Supply, deliver to site, off load on site and safely store. The fused switch shall be supplied complete with the pole mounting bracket, nuts, bolts, washers, etc. for securing the unit to the wooden pole. The fuses shall be supplied with the fuse switch unit. Fuse ratings shall be as shown on the drawings. Install the on load fused disconnecting switch on the transformer structure including the drilling of holes as required, including the termination of the LV ABC to the unit. Fuse ratings below allow for 120% overload.  One fuse unit is for the transformer and one unit per LV feeder for isolation/protection.						
5,29	63A Dual Phase Load disconnecting switch MORSDORPHER.	0309	No	6	R -	R -	R -
5,30	80A Three Phase Load disconnecting switch MORSDORPHER.	0309	No	2	R -	R -	R -
5,31	100A Three Phase Load disconnecting switch MORSDORPHER.	0309	No				
5,32	160A Three Phase Load disconnecting switch MORSDORPHER.	0309	No				
	<b>EARTHING OF LV NETWORK</b>						
Note	All MV transformer earthing is measured elsewhere and all LV earths per structure are measured with the structure. This section is intended for LV earths at transformers.  Allowance shall be made for the testing (including earth loop impedance) of the earth resistance for the entire reticulation system in accordance with the TN-C-S earthing system as defined in the Distribution Standard Part 2 and any earth tests which may be required in terms of the standard and detailed specifications. Use 2 x H-Crimps - neutral connection point.						
5,33	LV Earth	0627	No	5	R -	R -	R -
	<b>LV Pole Mounted Service Boxes (Outdoor)</b>						
	Supply and install on a wooden and/or concrete pole a pole mounted distribution box as specified complete with pole mounting brackets, cable ties, PG clamps, miniture circuit breaker(s), neutral, phase and earth bars, insulated copper tails for connecting to LV ABC, insulation piercing connectors and factory installed cable openings. Included shall be the stainless steel strapping and buckles and terminations of the tails onto the LV ABC. Allow for required space on DIN rail for appropriate no of EMU's. Supply and install 5kA, 5kV rating surge protection between phase-neutral. To comply with NRS032 and DSP0018.						
5,34	1-2 Way 1x50A MCB Split Box in ABC Split Box onto Insulated Neutral ABC	3055	No	35	R -	R -	R -
5,35	1-4 Way 1x50A MCB Split Box in ABC Split Box onto Insulated Neutral ABC	3055	No	14	R -	R -	R -
	Amount carried over to next page						R -

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
5,36	5-8 Way 1x50A MCB Split Box in ABC Split Box onto Insulated Neutral ABC	3055	No				
	<b>TESTING</b>  Allowance shall be made for the testing of each LV ABC distributor on accordance with the project specification. Included shall be the provision of test certificates and all documentation as required.						
5,37	LV Test, per zone. Ref. SCSASABZ1		No	5	R	-	R -
	<b>TOTAL: Carried forward to summary</b>						R -

BILL NO 6 - HOUSE CONNECTIONS SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION FOR								
SILI NDI	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price	
	<b>House Connections</b>  House Connections , test and commissioning complete. Poles and excavation are measured elsewhere.							
6,1	Type A	D-DDT-0360	No					
6,2	Type B - (Service pole 100%)  Supply and install, transport to site, offloading and safely store on the site the following Passive Base Units, ECU's , complete with rail, galvanised steel mounting brackets for securing to the dwelling, nuts, bolts, washers and lock washers as required. Secure the passive base, ECU and brackets to the dwelling as required including the termination of conductors. Excluding the conductors.	D-DDT-0361	No	93	R	-	R	
6,3	READYBOARD, 20A,SPLIT METER 2x16A SKTS D3176		No	93	R	-	R	
6,4	METER, 20A, SPLIT POWER-RAIL PLC D3145		No	93	R	-	R	
6,5	CIU		No	93	R	-	R	
6,6	Commissioning, testing and supply of certificate of compliance		No	93		R	-	
	<b>CONDUCTOR</b>							
Note	Measured lengths for stringing shall be net line route lengths and unit rates shall include for sag, cut-offs etc.							
	Contractor to supply, safely store, transport to site and string. Installation includes all glands, lugs, shrouds, termination and connections as required.							
6,7	Cable 1KV 2C 6mm SQ Concentric CU		m	4650	R	-	R	
6,8	Cable 1KV 2C 10mm SQ Concentric CU		m					
6,9	Submit populated <b>Control Sheet</b> and <b>PCS</b> CorDaptix information to the Project Engineer upon the successful energising of a customer. Payment will only be made upon the successful loading of the Data onto Eskom's CorDaptix software system. Resolve queries raised by Eskom and the Engineer.		No	93		R	-	
	<b>SUNDRY ITEMS</b>							
	Supply and install pole in excavated hole, including cutting and scaffolding, kicking bolts, bonding, treating, etc. Excavations and compaction are measured elsewhere.							
6,10	5m Pole, 80-99mm top diameter	0058A	No	93	R	-	R	
6,11	7m Pole, 100-120mm top diameter	0058B	No	10	R	-	R	
	Amount carried over to next page					R	-	

Item	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Amount brought forward from previous page						R -
	Determination of pole positions, excavate in all ground conditions as necessary, and supply a mechanical boring device if required. The rate shall include backfilling, compaction to 93% MOD AASHTO density, and where necessary the supply and transportation of suitable ground as may be required to receive the desired compaction, except where cement is specified. Any damage to existing services shall be made good by the Contractor at his own expense and to the approval or the PM(C).						
6,12	Hole for 5m service pole - 1m deep	No	93		R	-	R -
6,13	Hole for 7m service pole - 1.3m deep	No	10		R	-	R -
<b>TOTAL: Carried forward to summary</b>							R -

BILL NO 7 - DISMANTLING & REMOVAL SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION							
S.I.L.I N.D.I N.I.M	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	Recovering of Transformers, Structures, Insulators and Line Hardware.  Allow for the disassembly, removal transport to site store & to New Germany and booked back to stores with the relevant documentation. Include the backfilling consolidation and levelling of soil from excavation at the site of recovery.						
7,1	MV Transformers and structures.	No	No	0	R	-	R
7,2	Woodpoles MV incl. crossarms, insulators and hardware.	No	No	0	R	-	R
7,3	Stays assemblies complete (LV/MV).	No	No	0	R	-	R
7,4	Cross Arms, including assembly, accessories etc.	No	No	0	R	-	R
TOTAL: Carried forward to summary							R

BILL NO 8 - LINE ROUTE CLEARING SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION							
ITEM DINI, M ADUN	Description	DDT Ref	Unit	Qty	Supply Rate	Install Rate	Total Price
	<b>Line Route Clearing</b>  Clearing of trees from a servitude, including the stacking or disposal of cuttings and debris as directed by Eskom, and the poisoning of stumps with an approved poison/herbicide as per OHS Act & Eskom Regs. Cut bush & trees to be cut into 1-2m strips and removed from the MV/LV servitude. Allow for Security for working in the area where appropriate. Contractor to have certificates for ORHVS, Environmental Awareness, Plant Identification, Safe Working Procedures & Correct use of herbicides.  The CoW must audit quantities below and sign off as being correct, on notification from the Contractor to do so.						
8,1	<b>Dense bush</b> (thin dense blackwattles, thornbush or brambles - not possible to walk through) <b>MV strip</b> (12m either side of the centre line) to be cleared and poisoned		No	50	R	-	R -
8,2	Ditto, but for <b>LV</b> (1m either side of the centre line or as per Eskom Regulations & TSC request) and no poisoning required.		No	50	R	-	R -
8,3	<b>Small trees</b> (less than 30cm diameter) scattered bush or plantation - accessible on foot) <b>MV strip</b> (12m on either side of the line) to be cleared and poisoned.		No	100	R	-	R -
8,4	Ditto, but for <b>LV</b> (1m either side of the centre line or as per Eskom Regulations & TSC request) and no poisoning required.		No	50	R	-	R -
8,5	<b>Large trees</b> (greater than 30cm diameter) including poisoning/herbicides. Trees to be cut down as close as possible to the ground, but not higher than 50mm from ground level. Special equipment & expertise to be accommodated for where required for trees close to houses, roads, sensitive areas etc...		No	10	R	-	R -
8,6	Appointment of the Botanist to assess and apply for Tree-Cutting Permit	Prov. Sum	1		R 60 000,00	R	60 000,00
8,7	Submission of the approval of the Water Use Licence for MV/LV lines crossing any rivers	Prov. Sum	1		R 50 000,00	R	50 000,00
	<b>TOTAL: Carried forward to summary</b>					R	-

FINAL SUMMARY				
SILINDINI, MADUNA AND MAJOJWENI ELECTRIFICATION				
ITEM	DESCRIPTION	TOTAL SUPPLY	TOTAL INSTALL	TOTAL PRICE
1	PRELIMINARY AND GENERAL.		R -	R -
2	MEDIUM VOLTAGE SWITCHGEAR, SECTIONALISERS, TRANSFORMERS, ETC.	R -	R -	R -
3	MEDIUM VOLTAGE OVERHEAD DISTRIBUTION SYSTEM.	R -	R -	R -
4	SUPPORT FOR OVERHEAD RETICULATION.	R -	R -	R -
5	LOW VOLTAGE OVERHEAD DISTRIBUTION LINES.	R -	R -	R -
6	CUSTOMER SERVICES AND GENERAL.	R -	R -	R -
7	DISMANTLING.		R -	R -
8	LINE CLEARING.		R -	R -
SUB TOTAL A=				R -
Add: Contingencies ( 5% of SUBTOTAL A )=				R -
SUBTOTAL B=				R -
Add: VAT (15% of SUBTOTAL B)=				R -
TOTAL CARRIED FORWARD TO FORM OF OFFER=				R -

Signed on behalf of the Tenderer.....( Signature)

Date: .....

Tenderer's Name:.....( Company Name)